

Please add new claims 42-44 as follows:

--42. (New) The exposure apparatus of claim 12, further comprising a transaction system that transacts a reaction force exerted by a movement of the stage--

--43. (New) The method of claim 27, further comprising:
providing a transaction system that transacts a reaction force exerted by a movement of the stage.--

--44. (New) The method of claim 39, further comprising:
transacting a reaction force exerted by a movement of the stage.--

REMARKS

Claims 1-44 are pending. By this Amendment, claims 1, 12-14, 16, 18, 27-30 and 39-41 are amended and claims 42-44 are added. No new matter has been added.

Reconsideration in view of the above amendments and following remarks is respectfully requested. The attached Appendix includes marked-up copies of the title (37 C.F.R. §1.121(b)(2)(i)) and claims (37 C.F.R. §1.121(c)(1)(ii)).

I. CLAIM FOR PRIORITY

In the near future, Applicant will file a certified copy of JP-11-330700, filed on November 19, 1999, as required by 35 U.S.C. §119(b).

II. OBJECTION TO THE TITLE

The Office Action objects to the title. The title has been amended to correct this minor informality. Withdrawal of this objection is specifically requested.

III. CLAIM 13-17, 27-29 AND 39-41 SATISFY THE REQUIREMENTS OF U.S.C. §112, SECOND PARAGRAPH

The Office Action rejects claims 13-17, 27-29 and 39-41 under 35 U.S.C. §112, second paragraph. The Office Action states that it is unclear whether the recitation of "object" refers to the mask or the substrate. Claims 13, 27 and 39 have been amended in

conformity with §112, second paragraph. Withdrawal of this rejection is respectfully requested.

IV. THE CLAIMS DEFINE PATENTABLE SUBJECT MATTER

The Office Action rejects claims 1-7, 9-12, 18-24, 26-36 and 38-41 under 35 U.S.C. §103(a) over U.S. Patent 6,359,688 to Akimoto et al. in view of U.S. Patent 6,036,162 to Hayashi; and claims 8, 13-17, 25 and 37 under 35 U.S.C. §103(a) over Akimoto et al. in view of Hayashi and further in view of U.S. Patent 5,959,427 to Watson. These rejections are respectfully traversed.

None of the references teach or suggest all of the features recited in independent claims 1, 18 and 30. In particular, none of the reference teach or suggest "an actuator arranged [mounted] on the holder" as recited in independent claims 1, 18 and 30.

Instead, the actuator 34 of Akimoto is located on the wafer stage 12. See, e.g., Fig. 2 of Akimoto. Further, none of the actuators 131A, 131B, 131C or 108 of Hayashi are mounted on a holder which supports the projection system. See, e.g., Fig. 1 of Hayashi. Watson does not overcome these deficiencies.

Accordingly, the Office Action has not established a prima facie case of obviousness, as the applied references fail to teach or suggest all of the subject matter of independent claims 1, 18 and 30. Accordingly, the applied references also render obvious the subject matter of claims 2-17, 19-29 and 31-44, which depend from claims 1, 18 and 30 respectively. Withdrawal of the rejections under 35 U.S.C. §103(a) is therefore respectfully solicited.

V. NEW CLAIMS

Claims 42-44 have been added and are also patentable for the same reasons discussed above.

VI. INFORMATION DISCLOSURE STATEMENT

Applicant submits an accompanying Information Disclosure Statement and reference for consideration by the Examiner.

VII. CONCLUSION

In view of the foregoing, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



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Date: October 11, 2002

Attachments:

Appendix
Information Disclosure Statement
Petition for Extension of Time
Amendment Transmittal

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<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>

APPENDIX

Changes to Title:

The following is a marked-up version of the amended title:

~~EXPOSURE APPARATUS AND METHOD~~EXPOSURE APPARATUS AND METHOD
THAT EXPOSES A PATTERN ONTO A SUBSTRATE

Changes to Claims:

Claims 42-44 are added.

The following is a marked-up version of the amended claims:

1. (Amended) An exposure apparatus that exposes a pattern onto a substrate, the exposure apparatus comprising:
 - a projection system to project the pattern onto the substrate;
 - a holder connected to the projection system to hold the projection system;
 - a main frame that mounts the projection system by means of the holder;
 - a detector to detect information concerning displacement of the projection system;
 - an actuator arranged on the holder; and
 - a driver connected to the actuator to drive the actuator in response to detection results of the detector.
12. (Amended) The exposure apparatus of claim 1, further comprising:
 - ~~a main frame and an object stage that holds and moves an object; and~~ one of the substrate and a reticle that contains the pattern, the stage being mounted to the main frame.
 - ~~wherein the holder and the object stage are mounted to the main frame.~~
13. (Amended) The exposure apparatus of claim 12, wherein:
 - ~~the object stage includes a drive system that moves the object~~ one of the substrate and the reticle, the object stage drive system including a movable part that moves with the object one of the substrate and the reticle, and a stationary part that is coupled to the main frame; and
 - ~~the exposure apparatus further comprising a compensatory driving system that applies a compensatory force to the stationary part of the object stage drive system.~~

14. (Amended) The exposure apparatus of claim 13, wherein the ~~object is a~~
~~substrate onto which the pattern is projected by the projection system, and the object stage is~~
a substrate stage that holds and moves the substrate.

16. (Amended) The exposure apparatus of claim 13, wherein the ~~object is a~~
~~reticle that contains the pattern that is projected by the projection system, and the object stage~~
is a reticle stage that holds and moves the reticle.

18. (Amended) A method of making an exposure apparatus that exposes a
pattern onto a substrate, the method comprising:

providing a projection system to project the pattern onto the substrate;

providing a holder connected to the projection system to hold the projection
system;

providing a main frame that mounts the projection system by means of the
holder;

providing a detector to detect information concerning displacement of the
projection system;

providing an actuator on the holder; and

providing a driver connected to the actuator to drive the actuator in response to
detection results of the detector.

27. (Amended) The method of claim 18, further comprising:

providing a main frame; ~~and~~

providing ~~an object stage that holds and moves an object~~ one of the substrate
and a reticle that contains the pattern; and

~~mounting the holder and the object~~ the stage to the main frame.

28. (Amended) The method of claim 27, wherein the ~~object is a substrate onto~~
~~which the pattern is projected by the projection system, and the object stage is a substrate~~
stage that holds and moves the substrate.

29. (Amended) The method of claim 27, wherein the ~~object is a reticle that~~
~~contains the pattern that is projected by the projection system, and the object stage is a reticle~~
stage that holds and moves the reticle.

30. (Amended) A method of exposing a pattern onto a substrate through a
projection system, the method comprising:

~~projecting the pattern onto the substrate with a projection system;~~

holding the projection system with a holder;
mounting the projection system to a main frame by means of the holder;
detecting information concerning displacement of the projection system; and
driving an actuator mounted on the holder in response to the detected
information.

39. (Amended) The method of claim 30, further comprising:
holding and moving ~~an object with an object stage~~ one of the substrate and a
reticle that contains the pattern; and
mounting the ~~holder and the object stage to a~~ the main frame.

40. (Amended) The method of claim 39, wherein the ~~object is a substrate onto~~
~~which the pattern is projected by the projection system, and the object stage is a substrate~~
stage that holds and moves the substrate.

41. (Amended) The method of claim 39, wherein the ~~object is a reticle that~~
~~contains the pattern that is projected by the projection system, and the object stage is a reticle~~
stage that holds and moves the reticle.